What is claimed is:

1. A method of manufacturing a thin film magnetic head comprising:

a first magnetic layer and a second magnetic layer magnetically coupled to each other and having two magnetic poles facing each other with a gap layer in between near and in a recording-medium-facing surface to be faced with a recording medium;

a thin film coil provided between the first and second magnetic layers; and

an insulating layer for insulating the thin film coil from the first and the second magnetic layers, the second magnetic layer including a uniform width portion which defines a recording track width of the recording medium;

wherein the method comprises:

a first step of forming the first magnetic layer on a substrate through sputtering by using a magnetic material including iron nitride;

a second step of forming the gap layer on the first magnetic layer;

a third step of selectively forming at least the uniform width portion in the second magnetic layer on the gap layer by using a predetermined magnetic material, the uniform width portion extending so as to cross over a position in which the recording-medium-facing surface is to be formed; and

a fourth step of selectively removing the gap layer in a region other than a portion corresponding to the uniform width portion and selectively

removing the first magnetic layer in a region other than a portion corresponding to the uniform width portion to a predetermined depth, through reactive ion etching with the uniform width portion as a mask, in an atmosphere of gas including at least chlorine out of a group of chlorine and boron trichloride, and at an ambient temperature within a range of 30℃ to 300℃.

2. A method of manufacturing a thin film magnetic head according to claim 1, wherein the uniform width portion is formed through a plating process by using a magnetic material including iron, nickel and cobalt in the third step.

3. A method of manufacturing a thin film magnetic head according to claim 1, wherein the uniform width portion is formed through sputtering and an etching process by using a magnetic material including either a cobalt iron alloy or a cobalt iron alloy oxide as an amorphous alloy in the third step.

4. A method of manufacturing a thin film magnetic head according to claim 1, wherein the fourth step is performed at an ambient temperature within a range of 150℃ to 250℃.

5. A method of manufacturing a thin film magnetic head according to claim 1, wherein the gap layer is selectively removed in an atmosphere of

gas including chlorine and boron trichloride and the first magnetic layer is selectively removed in an atmosphere of gas including chlorine in the fourth step.

6. A method of manufacturing a thin film magnetic head according to claim 5, wherein the gap layer is selectively removed in a gas atmosphere built by setting an amount of the chlorine gas to be supplied within a range of 20 to 40 milliliters per minute and setting an amount of the boron trichloride gas to be supplied within a range of 60 to 80 milliliters per minute, and the first magnetic layer is selectively removed in a gas atmosphere build by setting an amount of the chlorine gas to be supplied within a range of 100 to 200 milliliters per minute.

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